

WHAT IS CLAIMED IS:

1. A communication system comprising:

an information server capable of performing communication in first and second communication modes; and
a communication apparatus capable of performing communication in the first and the second communication modes, the communication apparatus including:

communication means capable of performing communication with the information server in the first and the second communication modes;

a connection information storage section for storing a communication connection condition as connection information; and

a communication mode switching control section for controlling such that, upon reception of a request of information acquisition in the second communication mode from an operator when the communication means is connected with the information server in the first communication mode, a condition of communication connection with the information server in the first communication mode at a time of the reception of the information acquisition request is stored into the connection information storage section as connection information, switching of communication mode from the first communication mode to the second communication mode is carried out by releasing the connection of the communication means with the information

09901125-071001

server in the first communication mode and establishing a connection with the information server in the second communication mode, and the condition of communication connection is restored based on the connection information stored in the connection information storage section.

2. The communication system of claim 1, wherein the communication apparatus includes a switching condition storage section for storing a predetermined determination reference value, and wherein the communication mode switching control section compares an amount of information to be acquired from the information server and the determination reference value previously stored in the switching condition storage section, and determines whether to execute switching of communication mode or not, based on a result of the comparison.

3. The communication system of claim 1, wherein the communication mode switching control section determines whether to execute switching of communication mode or not based on a kind of information to be acquired from the information server.

4. The communication system of claim 1, wherein the communication apparatus includes a switching condition storage section for storing a communication charge for communication

connection time in each of the first and the second communication modes, and

wherein when an information acquisition request is received from the operator, the communication mode switching control section measures a communication connection time necessary for acquiring the requested information in each of the first and the second communication mode, and determines whether to execute switching of communication mode or not based on the measured communication connection times and the communication charges for the communication connection times in the first and the second communication modes, respectively, previously stored in the switching condition storage section.

5. The communication system of claim 1, wherein the communication apparatus includes a switching condition storage section for storing a predetermined time, and

wherein the communication mode switching control section compares a current time and the predetermined time stored in the switching condition storage section, to determine whether to execute switching of communication mode or not.

6. The communication system of claim 1, wherein the communication mode switching control section determines whether to execute switching of communication mode or not, based on the operator's operation.

09901125-071001

7. The communication system of claim 1, wherein when a communication mode switching instruction is received from the information server, the communication mode switching control section switches the communication mode, based on the switching instruction.

8. The communication system of claim 7, wherein the communication apparatus transmits to the information server a signal representative of whether to transmit the communication mode switching instruction from the information server to the communication apparatus or not, based on the operator's operation.

9. The communication system of claim 1, wherein when the communication mode switching instruction is received from the information server, the communication mode switching control section determines whether to follow the communication mode switching instruction from the information server or not, based on the operator's operation.

10. A communication system comprising:
an information server capable of performing
communication in first and second communication modes; and
a communication apparatus capable of performing

communication in the first and the second communication modes,
the communication apparatus including:

communication means capable of performing communication
with the information server in the first and the second
communication modes;

a connection information storage section for storing a
communication connection condition as connection information;

a switching condition storage section for storing a
predetermined reference value of an information transfer rate;
and

a communication mode switching control section for, when
the communication means is acquiring information from the
information server in the first communication mode, monitoring
a rate of information transfer from the information server,
comparing the information transfer rate being monitored and the
reference value of the information transfer rate previously
stored in the switching condition storage section, and in cases
where the information transfer rate being monitored does not
exceed the reference value, storing a condition of
communication connection with the information server at that
time into the connection information storage section as the
connection information, disconnecting the communication in the
first communication mode, establishing a connection with the
information server in the second communication mode to perform
switching of communication mode, and restoring the

communication connection condition based on the connection information stored in the connection information storage section when the communication in the first communication mode is disconnected.

11. A communication system comprising:

an information server capable of performing communication in first and second communication modes; and
a communication apparatus capable of performing communication in the first and the second communication modes,
the information server including:

communication means capable of performing communication with the communication apparatus in the first and the second communication modes;

a switching condition storage section for storing a predetermined reference value of an information transfer rate;
and

a communication mode switching control section for, when the communication means is transferring information to the communication apparatus in the first communication mode, monitoring the information transfer rate, comparing the information transfer rate being monitored and the reference value of the information transfer rate previously stored in the switching condition storage section, and in cases where the information transfer rate being monitored does not exceed the

reference value, causing the communication means to transmit a communication mode switching instruction to the communication apparatus, and

the communication apparatus including:

communication means capable of performing communication with the information server in the first and the second communication modes;

a connection information storage section for storing a communication connection condition as connection information; and

a communication mode switching control section for, when the communication means receives the communication mode switching instruction, causing a condition of communication connection with the information server at that time to be stored in the connection information storage section as the connection information, based on the switching instruction, disconnecting the communication in the first communication mode, establishing a connection with the information server in the second communication mode to perform switching of communication mode, and restoring the communication connection condition based on the connection information stored when the communication in the first communication mode is disconnected.

12. The communication system of claim 1, wherein after the information acquisition in the second communication mode is

completed, the communication mode switching control section automatically disconnects the communication in the second communication mode, and establishes a connection with the information server in the first communication mode to perform switching of communication mode.

13. The communication system of claim 1, wherein after the information acquisition in the second communication mode is completed, the communication mode switching control section receives the communication mode switching instruction from the information server, automatically disconnects the communication in the second communication mode, based on the instruction from the information server, and again establishes a connection with the information server in the first communication mode to perform switching of communication mode.

14. The communication system of claim 1, wherein after a predetermined time has elapsed since the information acquisition in the second communication mode is completed, the communication mode switching control section automatically disconnects the communication in the second communication mode, and again establishes a connection with the information server in the first communication mode to perform switching of communication mode.